AGRICULTURAL DEPARTMENT.

J. P. STELLE, EDITOR.

PUBLISHER'S Notice—All communications intended for this department should be addressed to Phor. J. P. Spritz. Fact Worth, Tex.

WHY NOT MAKE GLUCOSE?

Texas could best the world making glucore syrups; then why not make them? Within the cost decade the consumption of | of frish potators yields more glucose than glucone sweet chas attained to a magnitude in America that is truly starrling. Not long ago a representative of the Boston Commercial Reporter called on a ginconehandling from of that city (Messes, Alexander Bros. & Ca.) and gathered information | might be contributing largely to that "meewith reference to glucose which reads like a romance. The head of the firm stated that twelve years ago the demand on their house for glucose syrups did not extend beyoud a few barrels a mouth, but the demand has since so grown that an person outside the firm could form an Idea of it that would at all approximate to correctness. They were solving to confectioners, bakers syrup manufacturers, molasses mixers, pre serve maketa, cheanists, morocco leather sections of the United States, and then were also expering thousands of tens of their goods to foreign countries, and yettheir house was only one among many in

Clineaux asserting to Mr. Alexander anpoint in the market in two chapes: Hyrid process or comprand grape, storar, the latto help a organization of the syrup use ally rule, at from a goints to 4% cents a point, deposition or quality, and the grapeaugurat Oward to the cears. The scrups are recorded as the finest enables of the article and hence the ligher figures. Up ward-offsween emiral is now invested is given a manufacturery within the United State could be labor employed in the work is correspondingly finners:

The silicore on the American in order is reads matrily from corn, though he Europe

of core recuprate now on the marketconcentration article seems to give better infaction notic an to-price and quality. ny many iko ga it is not put tapon the eminisci in his processite as curronilited discretes having been made by Thick as around sted appearance, can be eigest no et. One mere establishment in a thereas were out all its products as fine cannihiled stature, and they seem to take went with annual cost it furthermore grees as the market as mine univerlend sugars. presenting a fine floory appearance, To this it is nell admitted, as there is nothing to do other than grind the product. Of course it is not near to sweet as the caue or next sames, but a large proportion; of consomers do not appear to notice this fact, and so take the policerized places of the In terminal cuffee; he programme to the real Even sorphum molarses is now exten-

savely adulterated with this partificial, glucase. While corrham molneses is fittle to the their time. See many and extended it common be made so cheaply as the other; besides our people have acquired a taste for the commendationers and bence the sorghum lines take detter on the market with that prenius fluxes imparted to it. Again, on a about all the same agroups are now a referated with gineses and house carry the stinces fince the miniteration of s or chain modes a often enables, the retail contento run it office a pune case producti Then with all this bundless quantity of places produced and hamiled in America there appears little danger of may coming post in the marriet. We are a continent of of communication and it would appear that o more we estable more we want On this assume it would be entirely safe mee must of our malayoes is now glucose) tor Eccus to so largely into plucose pro visition, provided the could do so with closed profiles. Before we are through we in have down that she could. As upcoprinte to come in here we copy from

r dingn's Burnt World of St. Lettis, as

in a part understanding why so much produce should be wanted. They say this country requires \$0,000,000 gallons of mocoming requires \$0,000,000 gallons of mo-lesses in a year. Somebody must be al-sense-draw be melasses from barrels, mo-poses pitchers are always being filled, there are many mouths always upon to take mallower. A shoulful of inclusives is noth-ice, but it takes a statesman with expan-e to how be comprehend the sum of all the resemble. Am has a wit, molesses mak-ers have to treet, so hard. When this com-test has a possibility of 100,000,000 the mo-lesses for the will have to work affairs and Sandays to supply the demand; they will have to by the lare to the large crairs. If it we are a possible of the size of increases used to an increase in a venil, I would be a measure of an which one could safety sail in a regular manof star. Somebody evidently gets exact with quantities of modesus. Somebody's obligate evidently spread molasses on both sail of their bread. If gives one a correct idea of the great wheat fields of the country to valentate the immease surface of country which all the millions of molasses septend. Animals have not yet intellect ach to appreciate molasses, and so mo lasses is human food; it becomes part of hu-

these become succharine angels.
Alorases becross are in some degree measures of civilization. This is the great-est country on earth, because it him and empties the greatest number of molesse

And yet the very great bulk of this is not molasses at all, but glucese, a substance cialmed by many scientists as being of rather doubtful wholesomeness, on account of certain chemicals employed in its manufacture. But the people take it all the same, and if they want it, why, let them have it. It is an affair of their own lookout. For our own part we could never reccommend glucose as something entirely good to take "for the stomach's sake," though we must admit that it is probably, as Sam Weller said, "very illin' for the price."

Chacose sold as molastes is simply a shoddy molasses, be it mixed or pure. If the people are determined to take a sheddy goods, and we are therefore forced to sell it to them, why not make it as well, if we can? And we can, doing it with more profit to ourselves than results to the Northern manufacturer. The Boston Com-

mercial Reporter says Irish potatoes make , better glucose than corn. A back issue of the Chleago Prairie Farmer says one bushel two bushels of core. Scientific investigations have shown that the sweet potato is richer in glucose-yielding elements than is the Irish potato And this at once lifts the curtain to a plain view of how Texas lasses sen." and doing it with great profit to herself. It is a well established fact that under good culture and intelligent management, we can easily raise 400 bushcis of sweet potatoes to the acre. If one bushel of sweet pointoes is worth as much in the manufacture of glucose as two bush els of corn, you can see that our land cultivated to sweet potatoes for the manufacture of glucose would be yielding us an equivaient of eight hundred bushels of corn to the acre. Then the culture and handling of the erop would be no more expensive than the cultivating and handling of an acre to corn. Why, there is millions in it, so to speak. This thing ought to be promptly looked

nto by our people. There is not one argument that could be brought to bear against as effering for us one of the biggest things imaginable. The land will produce the pointoes-no doubt of that-and the pointees would undoubteely yield the glucose. The hardiest and most productive potatoes we now grow would be the kinds most needed, for these are richest in starch and starch alone is the element converted into emease. With proper attention the polatoes could be so kept as would run the factors through a much longer season than a torghum, a beet or a cane sugar factory is

We do hour the needle of Texas will take his very important matter under consider ation. Nothing else is needed, for there are no tests to be made. Everything is bound to pan out precisely as named, hence there is nothing to do other than working no a will to get at it. The processes of cor exactly the same as those employed in convertice the Irish petato into starch. In one of the late war storch was largely made from sweet pointoes in both Goorgie and South Carolina, so there is no gues work about the matter. The yield of starch was large. Once we have starch the gluone may be regarded as made, for the proa sees to follow are few and simple.

STUDY OF BOTANY IN TEXAS.

Appropriately supplemental to Professor Researt T. Hill's interesting remarks on The Flora of Texas," as published in Tuz Gazeven of last week, is the following from that some leading American scientist. Like he last weak's article it was prepared exprovedy for us. Professor Hill says:

How can we create a love for the study of botant in Texas! In no state in the Union the attention paid to this beautiful ful study. In few of our schools is ind useful study. In few of our schools is he subject taught, and even our state uniestity, which pays \$16,000 a year for prosors of language, has not a single chair gasural history. Where natural history macurai history. taught—except in the Paris and one or to other schools—I have observed that the students do not study plants, but books. There is but one may for books in the ady of botany, and these should not be and at all by beginners, and that is for ference. The great text book of botany God's own fields and forests, Children cal plants—leaf, root and stem—and their ands should be disabused of the idea that

There should be local botanical clubs in flora should be collected and studied e chicaren and adults interested in find out how many and what kinds of plants w in their range of observation. Keep lists of them in the school archive on we will know much about the cautiful flores of Texas. Names, it should be remembered, are of least importance enclature is but a weak attempt on a part to classify and denominate the man's part to classify and denominate the beautiful and perfect nature. Learn the plants and their differences, and names can be reached later. If you have at plant which you do not know, after trying your best to find out yourself, then soud it to the isolanist of the department of acriculture, Washington D. C. He will tell you. If the many colored flowers which inhabit our woods and prairies are beautiful and useful, what a world of study and useful knowledge remains to man in the study of the lower forms of paint life in Texas.

te lower forms of plant life in Texas neus by our agricultural college. flowering plants, is far more useful to man kind, for if we include bacteria in the plant ingdom nearly all animal and plant dis-uses, their occurrence, preventive and are are based upon them. By a knowl-lge of the simple laws of their existence and propagation millions of dollars could be saved to our agricultural interests annually and allow me to predict that in a few ye the farmer who permits dead spots in ofton to grow and scatter their millions of spores over his neighbors fields, or his helera stricken hogs to roam the woods, and their uncremated carcasses to spread fection, will be held no less criminal than he barn-burner or fence-cutter, and laws will be enacted for his punishment just as in Connecticut it is now imprisonment for one to allow the "black knot"—a vegetable

NEW USE FOR SHEEP IN TEXAS. Here we usually raise sheep for the sheet

alone, looking to the wool or the carcass for our only profits. This comes of the fact wild range for the support of our sheep, and there is no getting around the fact that as a rule our wild range affords our sheep a very fair support. But Mr. Galen Wilson writes that even in the face of all this there s still a better way of managing sheep. There is in the sheep another prominent source of profit never much calculated pen by the Texan, where lands are looked pon as naturally rich enough for all pracical purposes in agriculture. This matter of rich lands may be all true enough, but there is such a thing as vastly improving the productive qualities of the richest lands, naturally, by what one might call taming them. Mr. Wilson says he once called upon a richland farmer and was surprised to find his crops looking much better than those of his neighbors working lands of precisely the same natural character. Asking the farmer for an explanation, that gentleman simply pointed to a flock of sheep quietly feeding in an adjacent field.

The farm under consideration was somewhat broken into ridges and knolls like much of the lands in Texas. There were no really poor lands on the place, though

farmer's sheep were systematically pastured on the lands he cultivated. It was the nature of the sheep to rest on some point of high ground in the field until that particular point had grown to be more or less littered, after which their peculiarities of cleanliness led them to move to a fresh fresh spot. Thus their work was continued until all the thinnest lands were attended to, and from these high lands much of the cavings of the flock were washed by raius to the lands on lower levels. The effects on the lands were marked, although naturally they appeared to have been all that crops need require, without any addition in this way.

This farmer who, like many others, had inclosed more ground than he needed to cultivate continuously kept one field under sheep treatment, devoting a year to the process. The growths on it pretty well tient up the sheep while at the same time the sheep contributed largely towards keep ing up the growths. Each alternate year the land was out to culture and superior crops were the result. He told Mr. Wilson that his gain from this process was beyond doubt, yet he was unprepared to give the exact per cent of gain. But so marked was the gain, he said, that if his sheep yielded no wool at all he would still keep them on his lands; or if they produced wool alone and no lambs he would keep them; and he was not at all sure but he would keep them. for the good they done to his crops if they gave him nothing save just lambs enough to keep up the flock.

It was not contended that the sincep directly enriched the land, taking general elements of plant food into consideration, but they tamed it. For best results lands must have something of that kind. For wild growths any good land may be all well enough, but our crops are tame growths, and therefore, some kind of taming is necessary to make everything con-

SAVE YOUR PEACHES.

"Eternal vigilance is the price of eaches." This, made up from what a creat man once said with reference to lib rty, was an aphorism of the late Capt. l-anc Donovan of Alabama, who in his time was the most extensive and successful peach grower in the lower South. It corectiv represents the true state of the case ven in a section where the orchardist has ower peach troubles, (as yellows, etc.,) to ontend against, than are characteristic of he Northern peach regions.

While it may be said that the Texas each grower has but two remediable aderses to circumvent, these, if left without due attention, are entirely sufficient to nather effectually blast his prospects for necess. One of these is found in the peach tree borer -the . Egeria exitosa of entomol orists—and the other in the plum for peach; sirculio, known to science as Contrachelus nenuphar. The former boxes into the body of the tree, usually about the carth line, and seriously duminess it-often kills itwhile the latter bores into the fruit, causing it to fall prematurely, or to be what we call "wormy peaches" at the stage of ripenesa. The tree borer can be easily knocked out by a correct application of the arsenical remedy already described in these columns, but to effectually get the better of the curculio is a thing by no means so easy of accomplishment.

The parent of the plum curculie, or worm found in the peach or plum, is a brownishblack beetle measuring only about onefifth of an inch in length. It is capable of flying and hence passes from tree to tree, usually moving at night. When the young plums or peaches are the size of a cranberry it begins "stinging them," as we say, that is, it cuts through the outer skin and in the opening so made deposits an egg. From this egg is soon hatched a minute grub or worm which at once cuts its way into the Finally when the grub has attained to full size the fruit falls and the grub quits it and goes into the ground, where it undergoes its transformations and in due time comes forth a perfect beetle ready to begin the work of a new generation in making wormy fruit. This kind of thing continues until the fruit remaining on the frees has attained to the age of ripeness, and we

then have a wormy product as the result. Several remedies for this post have been proposed and carried into practice by the Northern peach growers. One of these is known as "jarring the trees." Late of an evening or early of a morning, a sheet is spread upon the ground under the tree. A sharp blow with a mallet is given to the trunk of the tree. When the beetle up among the branches feels the jar it "possums." after the manner of some larger beetles, and falls to the sheet, where it can be found and destroyed. This remedy is pretty effectual though, of course, it involves close attention and a good deal of

Another popular remedy lies in having hogs running in the orchard to devour the curcullo-infested fruit so soon as it fails, and before the insects have had time to come out and go into the ground to transform and get ready for the next generation of worms. If one can get his hogs to eat the young and green fruit, this will do a great deal of good, but for our own part we have never yet been able to find a strain of hogs that would much take to this character of fruit. A hog must be rather hungry. we take it, to cat green peaches the size of a nutmeg, or smaller-the size when their

services are most needed. The best and simplest thing to do that we know of, where a person has only a comthat we have all along been looking to the | paratively small number of trees to look after, is to visit them night and morning with a basket, pick up all fallen fruit by hand, and burn it. Merely crushing it will do no good, neither will removing it to some other locality. It must be burned to destroy the insects. This is a work that the person with only a few trees, or only a small orchard of either plums or peaches. should never neglect. It does not take much of either time or trouble, and one plum or peach left upon the ground twentyfour hours may lead to the ruin of fifty

specimens later. Recently a good deal has been said in favor of spraying the foliage of peach or plum trees with Paris green or London purple as a remedy for curculio. There is much difference of opinion expressed with reference to the effectiveness of this method. If the parent beetle fed upon the fruit the remedy would be all right, of course, but since it does not, but merely punctures it and deposits an egg beneath the reach of the poison, many conclude that the spraying could do no kind of good. We are, ourself, rather inclined to that opinion. Some persons put bands of tarred paper around the trunks of their trees to prevent those topping the ridges were the thinnest. | the beetles from climbing up from the

and hence but seldom climb the trunks of

the trees. Gathering and burning the fallen fruit is a simple remedy entirely within the reach of all. It should be kept up as long as there is any unripe fruit to fall.

YOUR SOIL NEEDS HUMUS. The editor of the Southern Farm says many farmers with naturally rich lands. and who appear to work those lands well. yet fail to get a passable crop, and for the life of them they cannot tell way. In most cases it comes of a lack of decomposed vegetable matter in the soil, supposing the lands to be well drained. Of course soggy and badly drained lands could not give good results, even though every other needed condition was perfection itself.

Emile Wolff states, in his Practical Gardening, that the retentive power which a fruitful soil possesses for the more important plant-foods is partly dependent upon the humus (decomposed vegetable the clavey admixture in the composition thereof. Humus plays a material part in maintaining the productiveness of the soil for a considerable length of time, all the more on account of its slow but constant decomposition, whereby the vegetation is supplied with the necessary quantity of food during all the seasons of its growth. It is the part of the intelligent farmer, according to the composition of the soil and the manures applied, in connection with the limatic conditions, to hasten or retard the lecommosition of the organic matter by all appropriate methods, in order to obtain a uxuriant and highly profitable crop.

But the greatest advantage of humus lies

n the property which it usually possesse of improving the physical condition of the soil. By means of a fitting percentage of humus, that peculiar friable, mellow property is brought about; that medium physical condition which induces a luxuriant growth of the crop, assures the perfect utilization of the plant food mixed with the soil, and above all, fits the land for a profitable and intensive system of farming. Clay is made friable by the influence of humus, thereby also rendered more porous for the reception of moisture, air, and warmth, as well as for the expansion of the roots; puddling and the crusting of the surface are prevented. the perculating of the superfluous water into the subsoil and the ascent of moisture during periods of drouth are facilitated, the action of the weather upon the rocky particles and decomposition of the organic matter are intensified, thus making the plant-food more available, the absorptive proess and the ingress of the sun's warmth nto the deeper strata are expedited, and netivity of the soil, for the benefit of the rop in all its functions is quickened. On the other hand, dry soils not held open by humus are firmly held together and cemented, as it were, by every rain, to the undoubted injury of the crop.

Almost any kind of vegetable matter, weil decomposed, will prove of advantage to the soil. Some kinds are of more value than others, of course. The leguminous plants are supposed to give best results, as clover and field peas. The common weeds or grasses of the fields or prairies make a highly valuable addition to soils naturally inclined to pack.

Some writers advocate what they call fallowing the field, which means leaving it lying idle a season or so to grow up in weeds or grass. There is nothing in this if one has a use for his nervage and there is outside litter near at hand that he can hauf upon it. The only gain to be counted upon by this fallow or rest is the vegetable matter that will result. If the farmer finds more to his profits in a regular crop than it would cost him to gather outside matter and work it into his soil he had best gather the matter and go on with his regular cropping. The effect upon the land will be the ame in either case. "Resting land" is simply another term for "giving it hu-

FARMING AS A SCIENCE.

That poblest Roman among our agricul tural magazines, the Southern Cultivator, Atlanta, Ga., says the farming world has been agitated for months on the importance of reducing the acreage in cotton But the essential point has been overlooked, and that is reducing the cost of production It makes no difference to the farmer if it costs him 8 cents per pound to produce cotton and he can only sell it for that sum, or if it costs him 6 cents per pound and can only sell for six cents. But if he can make it at a cost of 6 cents per pound and sell it for Scents per pound it is different. It is a difficult matter for the farmer to

arrive at the cost of the production of cotton per pound valess he starts out with the determination of so keeping accounts of everything as will clearly show him at the final footing up. Several years ago Hon. W. L. Peck undertook the keeping of such accounts and the results showed him that the cost of producing cotton by even ordinary planters was not so great as has been figured up by those persons who for some reason or other are ever found swing ing back on cotton culture. Mr. Peck found that half a bale of cotton to the acre would cost the planter 6 1-5 cents per pound, or \$31 to the bale. He found that one bale to three acres would cost the planter 8 4-10 cents per pound, or \$10 to the bale.

This calculation is based upon what might be averaged as entirely bad farming -one bale to two acres is bad enough, in all conscience, while one bale to three acres is simply fearful. The Cultivator further states, on the authority of Mr. Peek, that one acre made to yield 774 pounds of lint cotton, as was the average of the result obtained in 1884 by seventy-four cotton planters, would reduce the cost of production to \$17.50 per bale, or less than four cents a pound. One bale to the acre is a thing easy enough under proper culture and management. On many occasions a very much larger yield has been made. In 1884 Mr. D. W. Perdue of Pike county, Ga., made 1545 pounds of lint cotton to the acre, which, all things considered, brought down the cost of production to \$10.00 per hale of five hundred pounds. According to this the farmer making such a crop, and selling his cotton at the unusually low price of eight cents a pound, would have a profit of \$30.00 on the bale, or more than \$90.00 on his acre's operations.

So you see, as we stated in our article last week, the thing for the planter to study is not a reducing of his production to force prices up to figures that will pay him for bad farming, but a reducing of the cost of production. This, says the Cultivator, should be the work of farm science, not only in the production of cotton, but every other product of the farm. The employment of improved implements in the cul-Further inquiry brought out that the ground. This is all folly, as the beetles fly, ture, the care and handling as well as mar-

keting of products; the systematizing of | people have to make us happy while they labor and the products of labor so as to make the farm, in all its departments, selfsustaining: all these will be necessary to achieve success. The study must extend to how to plant, what is the food for plants and for soil, how to prevent waste on the form and in the soil, how to bring up every part of the farm work so as to secure the greatest possible results on a sound economical basis; these are vital matters that will demand the attention of the farmer who wishes to succeed. It is clear that reducing the acreage in cotton will not result in benefit to the farmer so long as it costs

him so much to raise it.

Raise cotton or any other marketable eron that you would prefer to raise as your surplus, but do it at the least possible cost is the advice of agricultural science. Don't say you are raising it at the least possible cost still lower. That which has been done once can be done again. Set your plans for in a way that will enable you to work well up to your plans the closer you work to those plans the more money you will make. better off you will be in the end. How is it possible for any man to make money off a crop that costs him in production all he gets for it? No crop for which there is a standing and regular demand need do this. Somebody is making money off that crop. and if you are not doing it the fault is simply your own. Study to find out what that fault is, and when found apply the proper remedy.

OUR CORRESPONDENTS.

A SHADE TREE SUGGESTION. Texas needs shade trees, and now, just us

we are about entering upon what we call the "heated term," when a little shade will is a good time to talk about The maples, poplars, box elder and other four prettiest shade and ornamental recognification die from many causes in this elimate, as hot, dry weather, burers etc., and few live to be of much benefit to the grower. Something else is needed, have tried them all and have decided to You know what it is. Leaves ful and color attractive, beatthy and stands the heat and is troubled by no insects. Next is the Marianna plum. This is one

et is the Marianna plum. the most compact growers I find in xas. In fact, it is a perfet tree in all parnlars. Body neat and trim, follage de and it can be cut and shaped to suit the These trees are both fruit-bearing. This nulberry is a safe fruit grower; never

The Marianna plum is said to be a failure as a fruit-bearer here, but I have a model tree that is full of as pretty plums as I ave ever seen. But aside from their fruiting qualities, as hade trees, I believe both will prove all I

laim for them.

Nurserymen might help their trees by using the Marianna for budding and graft-

It is safe. ing. It is safe.
In these suggestions I have but one object in view - the benefit of a sun-searched people. I have no interest in any nursery or stock of trees, except those I grow for my own amusement and comfort. J. C. MARTIN.

While the reader who honored us with following through these columns some mentineago, has us to record as favoring for shade and ornamental trees in Texas such broad-leaf evergreens as could be made to tirely ready to admit that we much like the hint thrown out by our correspondent, If we must have deciduous trees, and can make fruit-bearing trees fully answer our purpose; why not adopt the fruit trees? The trees suggested by Mr. Martin, while bearers of excellent fruit, are probably superior to most other deciduous tree growths within our reach for purposes of shade and grunment. We are familiar with both of them. The mulberry named, understood to be a descendent from Downing's celebrated everbearing multicaulls seedling, grows readily from cuttines under correct management, while the Macianna plum is an off-shoot from the common Chickasaw, a species said to have originated in Arkansas, (Wood.) The new variety (Marianna), was discovered in an uncuitivated state near Marianna, Fla., hence its popular name. Both of these varieties mentioned by Mr. Martin bear a high order of fruit in their species, and the low-growing and compact habit of each well fits it for standing the breezes of an open country.

Of course there is nothing reliable in the prevailing impression to the effect that the Marianna plum fails as a fruiter in Texas. Managed as in Florida, it might be a failure, but Texas is not Florida. A few tests intelligently made for Texas might bring it to the surface as our very best plum. If the Chickneaw is really a native of Arkansas we can see no good reason for why the Marianna, its direct descendant, might not be an entire success in Texas. As a rule most of the methods in horticulture well suited to other regions are not all right for Texas, and vice versa. Until thorough experimentation at the hands of the horticulturist has shown what can or cannot be done it is decidedly unsafe to pass upon any temperate zone fruit as a failure in Texas,

OUR BEAUTIFUL WILDFLOWERS. Your talks on the wildflowers of Texas

are getting up quite an interest. Nothing so much rouses a people to an appreciation of what they have as intelligent references to their possessions. There may be some to say that talks about floras and flowers are of no permanent value, but for myself am happy to state that I do not belong to that particular class. The refined of all the world love flowers, and it is almost a thing of certainty that a person of refinement thinking of changing location to a new country, would find no small degree of at-traction in a knowledge of the fact that the land thought of for the new home was literally a "land of flowers." Already you have ore about our beautiful Texas flowers than I have yet seen in print anywhere else, and all together, but everybody seems pleased, and all I have talked with agree that you have not said too much aud indeed could not say too much in that The beautiful Texas flowers are direction. here, but the people at a distance who have never visited Texas in the season of wildflowers do not know it. Northern people come here in winter and follow the wild geese in their northward flight so soon as spring begins to appear. They know nothing of our delightful spring-time and summer-time beyond what they have heard, and much they have heard has sprung from the imagination of persons who never spent a spring and summer in Texas. Let us tell them something of what we stay-at-home

are away.

Last week you wrote of a beautiful primrese native to Texas and Alabama only. I inclose a flower to ask if it is what you referred to. I find it in two smales of color (clear white and pale red) growing abun-dantly on the prairie about Arilington NATIVE TEXAS LADY.

Fort Worth, Tex. Your flower is the same as mentionedthe (Enothern speciesa of botanists-but the printers not us in a little wrong relative to it's native inabitat. On the authority of Wood we had intended to state that it was peculiar to Texas and Arkansas, and not Alabama. We have no idea that a specimen of the plant was ever seen growing wild at any point east of the Mississippi river, and no botanist mentions having ever found i

anywhere save in Tonas and Arkausas. What you say concerning our humble efforts to do justice to the wild flowers of cost so leng as others have raised it at a Texas is certainly very pleasant reading for us, although read with feedlings of regret that we have not been able to do more. the cheapest possible production, and study | The fourth deserving to be told in that direction has not, as yet, been so much as hinted at. Our display of wildflowers is too grand to admit of any general descripidea of it at all bordering upon the reality. It is certainly passing strange that while the world abroad has heard so much of the advantages and glories of Texas her phenomenal wealth in untive flowering plants has been almost wholly left out of mention.

With us the flowers now making our prairies fairly to glitter are wild flowers, of course, but to the stranger with the wild flowers of other regions in mind, they would not seem that way. They have about them none of that courseness and ap- less, but modern science parent lack of development usually peculiar to wildflowers. A large, and we think the | trai | delusion. Nature most benutiful bouquet of flowers-wild or great wisdom had placed totame-that we have yet seen, was this week | a little beneath the sort of kindly shown us by Mrs. M. R. Walton of evaporation. They are then THE CAZETTE, It was composed of rich forth in sparkling purity and it specimens represented in at least two dozen | abundance at the beliest of their languages species, all noranged with the best of taste as to harmony of color. Every appearance of the composition might have been accepted as pointing to the handlwork of a trained artist, done in some millionaire's conservatory, and yet every flower in that collection had been guthered for her by a friend of Mrs. Walton's on the wild prairies of Texas, and in the immediate neigh borhood of Fort Worth. Truly, mature made Texas for a wonderful country.

THE BASKET WORM.

We have lately moved to a new home in the city. There are some centars on our thereof numerous little silken pouches, a specimen of which I incluse. If you can afford to do so without printing my real name, please tell me through The Gazette what they are and what they mean. surface are many leaves of the cedar. Fort Worth, Tex.

We would always prefer to print the real names of our correspondents, but in case where parties feel that they cannot afford to grant us this favor, but will give us the name in a private note for our own reference, we are willing to attend to their letters the same as if the name was anpended.

The specimen sent is the work of a small insect known by various common names, as the hong worm the bag worm and the basket worm. The scientific name of the insect is Thyridopteryx optemeraeformis It is quite a troublesome insect on our shade trees, working upon almost any species, but seeming to prefer the ever-

greens, as cedar, arborving and the like, The male of this species is a small brownish moth, which files at night, but the female is wingless and never leaves the basket alive, but carries it about with her whereever she goes, hanging downward from the succeed in our climate, and on our lines of | branch to which she clims with her feet. stitude and isothermal, we are still en- In the fall she fastens the top of the basket the opening. Thus the basket haugs through winter. Her egas are deposited in the interior of the basket, and early on spring those ergs batch out minute worms which come forth and enter upon the construction of new baskets to cover them through the summer and on to the next spring. In this way the routine goes on

from year to year. But two remedies for this pest have been proposed by entomologists as yet. One of these is to pick off and burn the baskets in winter, and the other is to spray the trees early in summer with some arsenical poison, as Paris green, London purple, or a diluted solution of arsenic. It is now too late to do any good in Texas by burning the baskets, as the young worms are already out. The insects, where fairly started will seriously injure the trees if not promptly destroyed.

THAT CONGO CHOKLAH AGAIN.

I see "Kafilr corn" bobs up again under another name, as it has done annually for the last twenty years. I would advise no the last twenty years. I would advise no one to waste time and soil by its cultivaion. The "seed sharper" will continue to the in his work, nevertheless, as heretofore. "Chokiah" makes good chicken feed, but is an especial favorite of that pest of the farmer, the "chinch bug." It is a greater breeder of this destructive insect than either spring wheat or millet. My advice from experience is to let it severely alone. Fort Worth, Tex. J. C. MARTIN,

We have still another charge to prefer against the so called "choklah." Some years ago we gave it a rather extended trial in lower Alabama, where the chinch bug is not known. It grew well, seeded well, and appeared to stand drouth better than almost anything else, but about the time the grain was coming into the milk state a strange caterpillar appeared and literally riddled the heads. This same thing happened three years in succession, which seemed to be enough of that kind "in our'n," so we then and there let up on the cultivation of "Congo choklah." then salling under the name of "pampas rice."

USES OF GYPSUM.

Please inform me of what uses gypsum is applied to, and also give me some idea of its value where found in large deposits.

JAS. F. WARREN. Pecos City, Tex. Gypsum is simply a sulphate of lime. The fine and transparent varieties are called selenite, and the fine but more massive varieties are called alabaster. When calcined the better grades of gypsum become what we know as plaster of Paris, a material largely employed in the arts, as for making casts, etc., and also for putting "hard finish" on plastered walls. Generally speaking, the plaster of Paris, so called, is imported, though is is highly probable that our rich gypsum deposits would enable us to prepare as good plaster of Paris in Texas as is prepared anywhere else. The most extensive use of American

gypsum, yet made, is as a fertilizing agent. Finely ground it becomes the well known | for turning the sawdust of rolls into

land plaster" of commerce, sold for es. riching lands. Supposed to be highly at vantageous to crops of wheat and other

small grains. There is probably not much in the tage owner of a gypsum deposit in Touring present, owing to the fact that I ma pushe s not much used by Southern toet, and to ship it a long distantoo much cut off an ability to com vantageously with the Northern of We are not entirely sure of this, he and therefore the third is were vestigation. No doubt the time and nally come that shall find the property and plaster a big thing for Te-

THE GREAT AMERICAN DISCOL How far is Fort Worth from ine of the great American de-imes cannot the Stakest Plates i man, and in the days of in treat American Desert was a r ure on our school atlases, b of Texas generously sent me b not at all define its location. He will not consider me too trouble-A. O. COOWAT.

The "Great American Descript"

with the things that were, or r.

the things that were not contra

general supposition of our to-There is no Great American Deser these never was. The area pointed an old mans as a govert is now as made up of the finest arriant and the world. It is rapidly self ueno distant day of the future : appear upon the mans us the spot of the earth. The old and impression of a desert gives of a that the region appeared to be tirely dispelled that ve upon the surface they would have belargely carried away by the to the so nature "canned" them as prevent that unnecessary waste posed-to-be desert. Tell true one of the cases in which delight . -- ! ous. There are still time opening of a ons desirons of obtaining place and permanent prosperity, out inthey are pouring in from all pair

POPULAR SCIENCE.

TEXAS TO BECOME THE GRAND IRON STATE.

To Test Wines Bogus Silks New Articles Stone-Great Electric Discours. Sawdust Charcoal-ifon we Drown-The Lightning Borse.

In an article contributed to the Popular ng and Mining Journal of New York, Professor Theo. B. Comstock of our date geological survey says it is as the sear of a commanding from industry that Centra Texas must look forward to her more in the main. With all the wonderful array a natural resource and artificial forcing which has brought to Helpt the great personation of the South in other districts, he do a nahositate to report from section knowledge that Texas may confidently expect to whenever her dormant Iron fields become fully known. In amount and quality and in facility of mining, reducing and make meturing and distributing of proother state can equal this which the ord pary forces of civilization have be a peop erty applied to utilize what nature not possided. Very extensive deposits of it a finest from ores occur all through the all . of Central Texas existing in great quant ties over wide beits, and many of the s show to analysis that they are extremly rich in metallic iron and free from und and able contamination.

A prominent chemist gives us a simple method for detecting fraud in red war-Mix fifty parts of the wine with me part of nitric acid of 10.40 specific practice." pose the mixture to a heat of 150 to 500 de a Fah. If the coloring matter in the water all right as from the grape no change well take place, but, on the other hand if are ficial coloring has been resorted to the what will at once lose its color.

Bogus sliks can be detected by high thloric acid. This being an energy vent of silk promptly destroys and fabric immersed in it, while it leaves title wool or cotton unaffected. If the clapure it will all disappear under the pasbut if it carries adulterations there we remain. If anything remains from a bred silk after it has been a few minute in il acid you may depend upon it the the was not pure. A new artificial stone espatia of belas

melted by heat and moulded into any desired shape, is the latest use at a science. It is a compound of Iron supliand silloon, and unless modified by 94 ments is of a dark state color. Works well with the usual stone-cutting tools, and take be readily turned in a lature. The testile strength is from 650 to 1200 pounds to the sound inch, and a compression of from 2000 to 12,000 is withstood. Specific gravity soc 1 26, the melting point is 500 degrees. Wiez melted the material can be easily use in 2 mould the same as a metal. It is called

"ferroid," and many claim that an account of its good qualities, associated with its comparative cheapness, it must soon be largely figuring in ornamental atome world for buildings and other purposes. Herr Gulcher, a German electroliana announces a new thermo-electric batters giving electric power equivalent to 1 05 per cent of the heat employed, and also improvements under way that will give 5 per cent net effect. The scientists who have examined his discovery are pretty well

fect in accordance with the plans of the discoverer, will excel the best dynama is ! point of efficiency.

agreed in the opinion that this new thermo-

electric battery, when rendered more per-

Every now and then some new thing turns up that fills one with wonder over why it should not have been sooner thought of. Among such is a new French discovery